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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS NOVEMBER-DECEMBER, 1954

By Winifred Sawtell Cameron

These results are based upon measurements made at the Naval Observatory on plates secured either there or at the Mt. Wilson Observatory. The symbols used for the entries in the successive columns are as follows:

U.T., the epoch of observation in Universal Time.
No., the identifying number of the group assigned by Mt. Wilson.
Δl, the heliographic difference in longitude from the central meridian, measured positive to the west.
φ, the heliographic latitude, measured positive to the north.
ρ, the heliocentric angular distance from the line joining the centers of the Earth and Sun.
A, the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.
s, the number of spots.

An asterisk means that no Mt. Wilson number was assigned. Plates secured at the Naval Observatory are indicated by N, and those at Mt. Wilson by M. The plate quality, which follows, is indicated by:

1, Poor; 2, Fair; 3, Good; 4, Very Good; 5, Excellent.

The following five quantities are listed successively at the end of each day, and give for that day:

1. The total number of groups, g.
2. The longitude of the central meridian, L_0.
3. The latitude of the center of the disc, B_0.
4. The total value of A.
5. The total value of s.

The mean daily area and the mean relative sunspot number, $r=10g+s$ are given at the end of the month.

These results are a continuation of those published in the *Monthly Weather Review* from February 1, 1927 to December 31, 1947.

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NOVEMBER

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
1.597 N–2					0	0
	(0)	(299)	(+4)		0	0
2.669 M–2					0	0
	(0)	(285)	(+4)		0	0
3.631 N–3					0	0
	(0)	(273)	(+4)		0	0
4.577 N–3					0	0
	(0)	(260)	(+4)		0	0
5.651 N–3	11204	+29	+25	35	12	1
	(1)	(246)	(+4)		12	1
6.661 N–2	11204	+43	+25	46	24	1
	(1)	(233)	(+4)		24	1
7.675 N–2	11204	+57	+25	59	36	1
	(1)	(219)	(+4)		36	1
8.599 N–2	11204	+71	+26	73	24	1
	(1)	(207)	(+4)		24	1
9.600 N–3	11207	−13	+26	26	16	1
	11207	−12	+25	25	16	2
	11207	−11	+27	26	16	2
	11206	− 1	−34	37	61	3
	11206	+ 4	−34	37	73	1
	11205	+60	+25	63	48	2
	(3)	(194)	(+3)		230	11
10.617 N–2	11207	+ 3	+27	25	16	1
	11206	+12	−34	39	121	1
	11206	+16	−34	40	73	1
	(2)	(180)	(+3)		210	3
11.740 N–2	11208	−59	−21	63	24	2
	11208	−57	−21	61	12	1
	11207	+16	+27	29	24	1
	11206	+24	−35	44	194	1
	11206	+26	−34	44	73	1
	11206	+28	−34	45	73	2
	11206	+31	−34	47	48	1
	11206	+33	−34	49	73	1
	(3)	(166)	(+3)		521	10
12.590 N–3	11208	−47	−22	53	24	1
	11208	−46	−22	52	24	1
	11207	+26	+27	35	24	2
	11207	+29	+26	36	36	1
	11206	+35	−35	50	194	1
	11206	+36	−33	49	12	1
	11206	+39	−33	52	12	1
	11206	+41	−34	54	24	1
	11206	+42	−34	54	32	1
	11206	+43	−33	55	36	1
	(3)	(154)	(+3)		418	11
13.575 N–2	11208	−34	−22	41	16	1
	11209	+ 8	+31	29	16	1
	11209	+11	+31	29	36	1
	11206	+48	−35	59	73	1
	11206	+49	−33	59	145	1
	11206	+50	−34	61	12	1
	(3)	(141)	(+3)		298	6
14.675 N–2	11206	+62	−34	69	145	1
	11206	+63	−35	70	36	1
	11206	+64	−35	71	24	1
	(1)	(127)	(+3)		205	3
15.571 N–3	11206	+75	−33	79	97	1
	(1)	(115)	(+3)		97	1
16.624 M–2					0	0
	(0)	(101)	(+3)		0	0
17.673 M–4	11210	−48	−34	59	16	1
	(1)	(87)	(+3)		16	1
18.681 M–3					0	0
	(0)	(74)	(+3)		0	0
19.661 M–4					0	0
	(0)	(61)	(+2)		0	0
20.644 M–3					0	0
	(0)	(48)	(+2)		0	0

NOVEMBER

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
21.797 N–2					0	0
	(0)	(33)	(+2)		0	0
22.607 N–3					0	0
	(0)	(22)	(+2)		0	0
23.659 M–3					0	0
	(0)	(9)	(+2)		0	0
24.840 N–3					0	0
	(0)	(353)	(+2)		0	0
25.747 N–2					0	0
	(0)	(341)	(+2)		0	0
26.787 N–2					0	0
	(0)	(327)	(+1)		0	0
27.676 N–2	11211	−17	+23	27	16	1
	(1)	(316)	(+1)		16	1
28.674 M–2					0	0
	(0)	(302)	(+1)		0	0
29.619 N–3					0	0
	(0)	(290)	(+1)		0	0
30.607 N–3					0	0
	(0)	(277)	(+1)		0	0
	Mean for 30 days A= 70, r=9.0					
1.626 N–1					0	0
	(0)	(263)	(+1)		0	0
2.650 N–3					0	0
	(0)	(250)	(+1)		0	0

DECEMBER

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
3.603 N–3					0	0
	(0)	(237)	(+1)		0	0
4.688 M–2					0	0
	(0)	(223)	(0)		0	0
5.674 N–2					0	0
	(0)	(210)	(0)		0	0
6.636 N–2					0	0
	(0)	(197)	(0)		0	0
7.631 N–2					0	0
	(0)	(184)	(0)		0	0
8.628 N–2					0	0
	(0)	(171)	(0)		0	0
10.609 N–2					0	0
	(0)	(145)	(0)		0	0
11.595 N–1					0	0
	(0)	(132)	(0)		0	0
12.717 M–2					0	0
	(0)	(117)	(−1)		0	0
13.814 M–2					0	0
	(0)	(103)	(−1)		0	0
14.721 M–2	11212	−10	+34	36	12	3
	(1)	(91)	(−1)		12	3
15.692 M–4	11212	− 2	+37	38	6	2
	11212	− 2	+38	39	6	1
	11212	− 1	+36	36	6	1
	11212	− 1	+35	35	12	2
	11212	0	+36	37	12	2
	11212	+ 1	+37	37	16	1
	11212	+ 2	+35	35	6	2

DECEMBER

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11212	+ 2	+34	35	12	4
	11212	+ 3	+37	38	6	1
	11212	+ 4	+34	35	12	1
	11212	+ 5	+35	36	145	1
	(1)	(78)	(−1)		239	18
16.810	11212	+14	+36	39	6	1
N−3	11212	+15	+36	40	12	1
	11212	+15	+35	38	85	2
	11212	+16	+34	38	48	1
	11212	+22	+34	41	242	1
	(1)	(63)	(−1)		393	6
17.676	11213	−78	+26	78	24	1
M−4	11212	+23	+36	43	6	1
	11212	+24	+36	43	12	1
	11212	+24	+37	44	6	2
	11212	+25	+36	44	12	3
	11212	+25	+37	45	6	1
	11212	+25	+35	43	6	1
	11212	+26	+34	43	6	1
	11212	+31	+34	46	242	3
	(2)	(52)	(−1)		320	14
18.674	11213	−67	+26	70	6	1
M−4	11213	−66	+27	70	24	1
	11213	−66	+25	69	6	1
	11213	−65	+26	68	12	1
	11213	−64	+24	66	12	2
	11213	−62	+24	65	6	1
	11213	−60	+24	64	12	2
	11212	+36	+37	52	6	3
	11212	+38	+34	51	24	7
	11212	+39	+35	53	12	2
	11212	+40	+34	53	12	4
	11212	+42	+34	54	6	1
	11212	+43	+33	54	6	1
	11212	+44	+34	55	291	9
	(2)	(39)	(−1)		435	36
19.726	11213	−52	+26	58	61	1
N−2	11213	−50	+25	56	48	1
	11213	−47	+24	53	73	1
	11212	+51	+35	60	73	2
	11212	+57	+34	64	388	1
	(2)	(25)	(−2)		643	6
20.640	11213	−34	+24	42	61	1
N−2	11212	+62	+36	68	36	1
	11212	+68	+34	72	339	1
	(2)	(13)	(−2)		436	3
21.634					0	0
N−2						
	(0)	(0)	(−2)		0	0

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
22.619	11213	− 7	+24	26	73	2
N−2						
	(1)	(347)	(−2)		73	2
23.603	11213	+ 4	+24	26	73	2
N−2	11213	+ 5	+24	26	97	1
	(1)	(334)	(−2)		170	3
24.689	11213	+19	+24	33	48	5
M−3						
	(1)	(320)	(−2)		48	5
25.730	11213	+34	+24	42	48	1
N−2						
	(1)	(306)	(−2)		48	1
26.679	11213	+46	+24	52	24	1
N−3						
	(1)	(293)	(−2)		24	1
27.597					0	0
N−3						
	(0)	(281)	(−2)		0	0
28.822					0	0
N−3						
	(0)	(265)	(−3)		0	0
29.671	11214	− 5	−24	23	6	2
M−4	11214	− 5	−23	21	24	4
	11214	− 3	−25	23	6	1
	11214	− 2	−26	24	48	3
	(1)	(254)	(−3)		84	10
30.604	11214	+ 6	−23	22	97	2
N−4	11214	+ 6	−24	23	121	2
	11214	+ 6	−25	24	24	1
	11214	+ 8	−25	24	48	2
	11214	+ 9	−25	25	24	1
	11214	+12	−24	25	242	3
	(1)	(242)	(−3)		556	11
31.612	11214	+19	−23	27	145	1
N−3	11214	+19	−24	28	194	5
	11214	+24	−25	32	36	2
	11214	+26	−24	34	242	1
	(1)	(228)	(−3)		617	9

Mean for 30 days
A= 137, r= 10.6

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